

10/523479  
 DT01 Rec'd PCT/PTC 04 FEB 2005

## SEQ ID NO: 1 (Human CatSper 3 cDNA)

ATGAGGGATA ATGAAAAGGC CTGGTGGCAG CAATGGACCT CCCATACAGG 0050  
 CCTCGAGGGG TGGGGCGGG A CTCAGGAGGA CCGTATGGGG TTTGGAGGGG 0100  
 CAGTAGCTGC ACTGAGGGGC CGCCCTCTC CCCTGCAGAG TACCATTAC 0150  
 GAGTCCTACG GTGGGCCAGA GGAGCAAGTG CTCATCAACC GCCAGGAAAT 0200  
 CACGAACAAA GCGGACGCCT GGGACATGCA GGAGTTCATC ACTCACATGT 0250  
 ACATCAAGCA GCTGCTCCGA CACCCCGCCT TCCAAGTGCT GCTGGCCCTG 0300  
 CTGCTGGTGA TCAATGCCAT CACCATCGCT CTCCGTACCA ACTCCTACCT 0350  
 GGACCAAGAAA CACTATGAGT TGTCTCTAC CATAGATGAC ATTGTGCTGA 0400  
 CCATCCTTCT TTGTGAGGTT CTCCTGGCT GGCTCAATGG CTTCTGGATT 0450  
 TTCTGGAAGG ACGGCTGGAA CATCCTAAC TICATTATCG TCTTTATCTT 0500  
 GCTCTGCGG TTCTTCATTA ATGAAATCAA TATTCCCTCC ATCAACTACA 0550  
 CTCTCAGGGC GCTTCGTCTG GTGCATGTGT GCATGGCGGT GGAGCCCCCTC 0600  
 GCCCGGATCA TCCCGCTCAT CCTGCAGTCG GTGCCTGACA TGGCCAATAT 0650  
 CATGGTCCTC ATCCTCTCT TCATGCTGGT TTTTCCGTG TTTGGAGTAA 0700  
 CACTCTTGG TGCAATTCTG CCCAAGCATT TCCAGAACAT ACAGGTTGCG 0750  
 CTGTACACCC TCTTCATCTG CATCACCCAG GACGGCTGGG TGGACATCTA 0800  
 CAGTGAACCTC CAGACAGAGA AGAGGAATA TGCAATGGAG ATTGGGGGTG 0850  
 CCATCTACTT TACCATCTTC ATCACCACATCG GTGCCTTCAT TGGCATCAAC 0900  
 CTGTTCTGTCAC TCGTGGTGAC CACCAACCTG GAGCAAATGA TGAAGGCAGG 0950  
 AGAGCAGGGG CAACAGCAAC GAATAACCTT TAGTGAGACA GGCGCAGAGG 1000  
 AAGAGGAGGA GAATGACCACTG TGCCACTGG TGCAATTGTGT GGTGCCCCGC 1050  
 TCGGAGAAAT CTGGTCTCCT CCAGGAACCC CTTGCGGGAG GCCCCCTGTC 1100  
 GAACCTCTCA GAAAACACGT GTGACAACCT TTGCTTGTG CTTGAGGCAA 1150  
 TACAGGAGAA CCTGAGGCAG TACAAGGAGA TCCGAGATGA ACTCAACATG 1200  
 TAG 1203

## SEQ ID NO: 2 (Human CatSper 3 Protein Sequence)

MRDNEKAWWQ QWTSHTGLEG WGQTQEDRMG FGGAVAALRG RPSPLQSTIH 0050  
 ESYGRPEEQV LINRQEITNK ADAWDMQEFL THMYIKQLLR HPAFQLLLAL 0100  
 LLVINAITIA LRTNSYLDQK HYELFSTIDD IVLTLCEV LLGWLNGFWI 0150  
 FWKDGWNILN FIIVFILLR FFINEINIPS INYTLRALRL VHVCMAVEPL 0200  
 ARIIRVILQS VPDMANIMVL ILFFMLVFSV FGVTLFGAFV PKHFQNIQVA 0250  
 LYTLFICITQ DGWVDIYSDF QTEKREYAME IGGAIYFTIF ITIGAFIGIN 0300  
 LFVIVVTTNL EQMMKAGEQG QQQRITFSET GAEEEEENDQ LPLVHCVVAR 0350  
 SEKSGLLQEP LAGGPLSNLS ENTCDNFCLV LEAIQENLRQ YKEIRDELMN 0400

## SEQ ID NO: 3 (Murine CatSper 3 cDNA)

ATGTCTGAAA AACACAAAGTG GTGGCAGCAG GTGGAGAAACA TCGACATCAC 0050  
 ACACCTGGC CCTAAGAGAA AAGCCTATGA ACTCCTGGGT CGGCATGAGG 0100  
 AGCAAGTGCT CATCAACCAGC AGAGATGTCA TGGAGAAGAA GGATGCCTGG 0150  
 GATGTACAGG AATTCACTAC TCAAATGTAT ATCAAGCAGT TGCTCCGCCA 0200  
 TCCGGCCCTC CAGCTGCTGC TGGCCTTCT GCTGCTGTCC AACGCCATCA 0250  
 CCATTGCCCT TCGCACCAAC TCTTATCTCG GTCAAGAAACA CTACGAGCTA 0300  
 TTCTCGACCA TAGATGACAT TGTGTTGACG ATCCTTATCT GCGAGGTTCT 0350  
 GCTTGGTTGG CTTAACGGCT TCTGGATTCTT CTGGAAGGAT GGCTGGAATA 0400  
 TCCTCAACTT CGCAATTGTC TTATCTTGT TTATGGGGTT CTTCATAAAA 0450  
 CAACTTGACA TGGTTGCCAT CACCTACCCCT CTCAGGGTGC TCCGGCTGGT 0500  
 GCATGTGTGT ATGGCGGTGG AACCCCTGGC CAGAACATCATC AAGGTTATCC 0550  
 TGCAGTCGAT GCCAGACTTG GCCAATGTCA TGGCTCTCAT CCTCTTCTTC 0600  
 ATGCTGGTAT TCTCTGTGTT TGGGGTCACG CTCTTCGGTG CATTGTGCC 0650  
 CAAGCATTTC CAGAACATGG GGGTTGCCCT GTACACGCTC TTCATCTGCA 0700  
 TCACTCAGGA TGGATGGCTG GACATCTACA CTGACTTCCA GATGGATGAA 0750  
 AGAGAGTACG CGATGGAGGT CGGGGGCGCC ATCTACTTGT CCGTCTTAT 0800  
 CACCCCTCGGT GCCTTCATTG GTCTCAACTT GTTCGTCGTC GTGGTGACCA 0850  
 CAAACCTGGA ACAAAATGATG AAGACCGGGC AGGAAGAGGG ACACCTGAAC 0900  
 ATAAAGTTA CTGAGACAGA AGAGGATGAG GACTGGACCG ACGAGCTGCC 0950  
 ACTGGTGCA TGTACAGAGG CCCGCAAGGA TACTTCCACT GTCCCCAAGG 1000  
 AACCACTGGT TGGGGGCCCT CTGAGTAACC TCACAGAAAA GACCTGCGAT 1050  
 AACCTCTGCT TGGTGCTGA AGCAATACAG GAGAACTTGA TGGAGTACAA 1100  
 AGAGATCCGA GAGGAACCTCA ACATGATCGT GGAGGAAGTG TCCTCCATCC 1150

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GGTTCAACCA GGAGCAGCAA AATGTGATCC TACACAAGTA TACCTCCAAA	1200
AGCGCCACCT TCCTAACGCGA GCCCCAGAA GGGGCTAACAA AGCAAGACTT	1250
GATCACTGCG CTGGTCAGCA GGGAAAAGGT GTCTGATTCT AACATAAAACA	1300
TGGTTAACAA ACACAAGTTC AGCCACTGA	1329

## SEQ ID NO: 4 (Murine CatSper 3 Protein Sequence)

MSEKHKWWQQ VENIDITHLG PKRKAYELLG RHEEQVLINR RDVMEKKDAW	0050
DVQEFTQMY IKQLLRHPAF QLLLAFLLLS NAITALRTN SYLGQKHYEL	0100
FSTIDDIVLT ILICEVLLGW LNGFWIFWWD GWNLNFAIV FILFMGFFIK	0150
QLDMVAITYP LRVRLRVHVC MAVEPLARII KVILQSMPDL ANVMALILFF	0200
MLVFSVFGVT LFGAFVPKHF QNMGVASYTL FICITQDGWL DIYTDFQMDE	0250
REYAMEVGGAA IYFAVFTLGF AFIGLNLFVV VVTINLEQMM KTGEEEGHLN	0300
IKFTETEED EWTDELPLVH CTEARKDTST VPKEPLVGGP LSNLTEKTC	0350
NFCLVLEAIQ ENLMEYKEIR EELNMIVEEV SSIRFNQEQQ NVILHKYTSK	0400
SATFLSEPPE GANKQDLITA LVSREKVSDS NINMVNKHKF SH*	0442

## SEQ ID NO: 5 (hCatSper3 5' flanking sequence containing basal promoter region)

GGGCTGCCGG GGGTAGGAGG TGGGGATAAAA CAACAGGGCG TGAGGTCAG	0050
ACAGAAACCC TCTGTGCTTT CCACCCCTGCC TGAGGCCAG CCCTGCTCAA	0100
GCTGGGAGTC CCCTCCATGG AGACACATCA CCTGCAGCCA CCCCCCACACA	0150
GCGCAGCCCCA CGGACCTCCT TTGGCTCTCT GACAGGTGCT GGGCTGGAGT	0200
TGGGAGCTGG GCTGGGGGCT GGGGTGGGCA CATCCTCATC CTGCTCTTCC	0250
CTCCCCACAGA CAGCAGTGAAG GAGGCAGCTGG AAGGAATGGT ACAGGGGGCTG	0300
AGGCAGGGTG GCGTGTCCCT CCTAGGCCAG CCACAGCCCC TGACCCAGGA	0350
ACAGTGGCCGG AGCTCTTCA TGCGGCCAA CCGAGACCC CAGCTCAATG	0400
AGCGAGTGCAG CGTGTGCGG GCGCTACAGA GCACACTCAA GGTCAGCTGG	0450
GGGGCTCTGG GCACAGCAAG GGACTAGGCT CTGGGCTTCA GGCTTTGGTT	0500
TGCGGCTGTC ACCTCCACCC TGGGCACCGAG ACTCCAGACT CCAGACTCAG	0550
CTCCGGACCC TGGGCTTAGC AGCTGACAGC GGGCTCAGCT GTGGACTGGG	0600
CCAGGCTCTG GGTTCCAGT GGGGATTGA GTCTCACCTA GGTCCTCGT	0650
GCCACGCTGG CCAGGTGCTG GCTTCCAGGC ACCGGACCTC CGGAGTGAAG	0700
TCTGGCCTCG GGCTCTGCC ACCTCCCTGG GTGATCATGG TCCCTAGCC	0750
CCTCCCTCTAC ACACAGGCAA AGCTGAGGA GCTGCAGGTC CTAGAAGAAG	0800
TGCTGGGTGA CCCTGAGCTG ACAGGAGAGA AGTTCCGCCA GTGGAAGGAG	0850
CAGAACCGGG AGCTGTACTC AGAGGGCCTG GGGGCTGGG GAGTGGCACA	0900
GGCTGAAGGC AGCTCCCACA TCTTGACCTC TGACTCCACA GAACAGTCCC	0950
CCCACTCCCT GCCCTCTGAC CCTGAAGAGC ACTCCCCACT CTGCCCCCTG	1000
ACCTCAGAGA GCAGCCTCCG ACCTCCCTGAC CTCTGACCCCT GGCCAGCACT	1050
CTAGCTCTG ACCTTTGACC CGAGGGCCAC CTCAACCCCA GCTTCTGACG	1100
TGTCAGGAC AGAGCATCCC TGGATTCTGT TCAGGGTGGG AAGTAGTACT	1150
GCTAGTCATG GTCTCACCCCC GAGCTGACCC CTCTGCCCTGG GCCTTGTGCC	1200
ACCCCTCTCCC TTGCCAAAGA AGAAACTCTC CCCCCAAATC CTCCAACCTC	1250
TGGGGCCACA GCCCTGCCCT TCCAGTCCCT TGGCAGTTCT CCCCCAAACC	1300
AGGTCTGTAC AGGTGTTCTT TATTTACAT GAGGGCTACT TTCCAACCAA	1350
ATAAAAGTCAA TTTTCTAAG AATGAGTCTA CATGTAATT TACTCCATA	1400
TTCGAATTGG AAATCTGCC CCCTGTGGGG ACTGGGGTGA GTGCTCTTGG	1450
CCAGAGGGTG GGTGGCAGAC CCTCGTGCA GCCCCTTGGC CTGGGCTCTG	1500
TACCCGAGCT CCAAGCCTGC CAGGATGGTG GGGGATGACC CATGGCTAAT	1550
GAGGGCTCCG ACTCATGTCC ACCTCTCCCC AGCTCTTGA AGGCTAATGG	1600
TGATCTCTA CCCCCATTCCC GGGGGCACA CAATGAGAAA CTTCCACTT	1650
GTAGATGGGG AAATGCACTT TGCACGGAAA GGTGGTGGGG ACAGTCCTGG	1700
AGACTGGGCT GGTAGGACAG GGCAGCTGGT GGGGAAGGGT GCAGGGTGTAG	1750
GTCTGCCCTG GGAAGGCCCT GGGGAAAACA CTTCTCTCCT TCACTCCTCA	1800
TTCCAGCCTC ACCTCCACCT CCTGGATCCA AGGCAGGGAC ATGTCCCTGT	1850
GACTCCATTG AGGCTGCACG GGAAATCTGA CCTGCTCCCA TCAGCCTCTG	1900
ACTTCCAACC CCAGCCCCAGC ATCCCCACAG CATCCCCAGA CTTCCCTCTG	1950
GGGATGCGGA GGAGGGCCAA TGGGAGGGAGC TTCTCTCCAG GTTGGAAATT	2000
CTCAGTAGAA TGCAGACGGC TGGAGGTCAC AGAGGCCTCT GTGATATCAC	2050
CACGAGGGGG AGTGAGACCA CTTGGAGTG	2079

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SEQ ID NO: 6 (hCatSper3 5' UTR)

AAGATTCTTT GAGGAGAAGG AAGAGACTGA GCAAAC

0036

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SEQ ID NO: 7 (hCatSper3 3' UTR)

GGGAGGGTAC TGGGGCTGCC CCCAAGTCAT GTGAGTCAAG GCTGGGCGGA	0050
GCGTCAGAGT CTTCTGGCCT TCACGCCCTC ACCATTATA AGGCAGAGCC	0100
TGGGCCAAC AGAGGTCCCC CACCTATTG GTGGAGGAAC TGGAAATCCAG	0150
ACTCCAGGTT CCTTCCATCT CACACAAGGG CACAGCTCGG CCTGGGTCTC	0200
TGTCAGGGCT GCGTGGGAGA GCGAACGGGG GGTGACGCCA GGGAAAGAGGT	0250
GGGAGGGCTG CTTCCCTCCC CTGAGGCCCT CTGAAAGGCCA CTCACTGCTC	0300
CACCCCCAGG ATTGTGGAGG AGGTGCGTGC AATCCGCTTC AACCAAGGAGC	0350
AGGAGTCAGA GGTGTTGAAC AGGCCTCGT CGACGAGCGG GTCTGGAG	0400
ACTACGTCAT CCAAGGACAT CCGCCAGATG TCTAACAGC AAGACTTGCT	0450
CAGTGCCTC GTTACATGG AAAAGGTG	0478